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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,140	06/30/2000	Kia Silverbrook	PAK01US	2317

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BALMAIN, 2041
AUSTRALIA

EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 02/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/609,140

Applicant(s)

SILVERBROOK ET AL.

Examiner

Michael P Nghiem

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51-53 is/are allowed.
- 6) ☒ Claim(s) 1-10, 17-19, 24-27, 30-35, 43-45, 49, 50 and 54-56 is/are rejected.
- 7) ☒ Claim(s) 11-16, 20-23, 28, 29, 36-42 and 46-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 12 December 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

The Amendment filed on December 12, 2001 has been acknowledged.

Withdrawal of Allowability

1. The indicated allowability of claims 2-10, 17-19, 24, 25, 27, 31-35, 43-45, and 54-56 are withdrawn in view of the newly discovered reference(s) to Silverbrook (US 6,318,849). Rejections based on the newly cited reference(s) follow.

Claim Objections

2. Claim 6 is objected to because of the following informalities:
- "a said" should be -- said --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 54-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 54, the method for assembly an inkjet printhead assembly is not recited in claim 30.

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-10, 17-19, 24-27, 30-35, 43-45, 49, 50, and 54-56 are rejected under 35 U.S.C. 102(e) as being anticipated by Silverbrook (US 6,318,849).

Silverbrook discloses all the claimed features of the invention including:

- a support (Fig. 1) for a plurality of inkjet printhead segments (71, 72, 73), said support including:
 - a hollow elongate member (14) having at least one ink supply channel (26, 27, 30, 31) formed therein, the or each ink supply channel being in fluid communication with an elongate slot (50) in and extending at least partly along the elongate member (Figs. 1-3); and a plurality of printhead segment carriers (sections of 70 for mounting 71-73, Fig. 8) received and secured in neighbouring arrangement within the slot (Figs. 1, 8), each printhead segment carrier being adapted for mounting thereto of at least one printhead segment (71-73), wherein each printhead segment carrier includes at least one ink gallery (33, 34, 38) arranged so as to connect the or an associated one of said ink supply channels (Figs. 1-3) with an ink inlet (20-22) of said at least one printhead segment when mounted to that printhead segment carrier (Fig. 1);
 - when mounted to the support the at least one printhead segment on each printhead segment carrier has a defined printing range in a direction lengthwise along the elongate member, and wherein the printing ranges of the printhead segments

mountable to a plurality of adjoining printhead segment carriers overlap, thereby to define a combined printing range of greater lengthwise extent than any of the printing ranges comprised therein (pagewidth print head 1, Fig. 1);

- the printhead segment carriers are substantially identical to one another and have stepped terminal ends (steps between 71-73, Fig. 8) thereby to enable neighbouring pairs of printhead carriers to be mounted within the slot in orientations substantially oppositely to one another in a direction transverse to the elongate member (Figs. 1, 8);

- each stepped terminal end of a carrier includes inner and outer end faces (inner and outer surfaces of steps, Fig. 8) extending substantially transversely within the slot from points at least approximately midway across the slot, said inner and outer end faces being spaced apart in a direction along the slot (steps are spaced apart), and wherein said terminal ends are shaped mirror-symmetrically so that the outer end faces are further apart in a direction along the elongate member than the inner end faces (Fig. 8);

- each printhead segment carrier has an elongate recess (43, 47) in an external surface of the carrier within which at least one printhead segment is received when mounted to the printhead segment carrier and wherein said recess extends along the carrier between ends each located longitudinally between said end faces of a terminal end, whereby recesses of neighbouring pairs of carriers overlap in a direction along the elongate member (Fig. 8);

- opening into said recess of each printhead segment carrier is at least one elongate ink delivery slot extending therealong, the or each of which is in fluid communication with one only said ink supply channel via the or a said ink gallery extending from said at least one ink slot to an opening in a rear face within the slot of the printhead segment carrier (43, 47 in communication with 34, 38, Fig. 4);

- in fluid communication with the or each ink delivery slot, there is a plurality of said ink galleries and said openings and wherein said openings associated with the or each said ink delivery slot are arranged in a row extending in a direction along the elongate member (Figs. 1-4);

- wherein said external surface has a second recess (56) formed therein and adapted to receive at least a part of a power or signal conductor terminating on the or one said printhead segment mounted to the printhead segment carrier (column 9, lines 27-30);

- said conductor comprises a tape automated bonded (TAB) film (column 9, lines 27-35);

- said tape automated bonded film (TAB) is wrapped around an external surface of the elongate member and terminated on a printed circuit board secured to a side of the elongate member opposite to the printhead segment to which it is connected (column 9, lines 27-35);

- the elongate member has three, four or six of said ink supply channels, one each for a preferably differently colored ink (Figs. 2, 3);

- - each printhead segment carrier is mounted within the slot at a longitudinal position within a predetermined tolerance distance of a designated longitudinal position of the carrier, corresponding to a designated longitudinal position within the slot of a printhead segment when mounted to said printhead segment carrier (71-73 are mounted along the longitudinal direction of 70);
- the elongate member is of substantially constant cross-sectional shape along its entire length (Fig. 1);
- in cross-section the elongate member includes a peripheral structured wall including a base wall section (base wall of 14 receiving 70, Fig. 1), and side wall sections (side walls of 14 receiving 70) standing out from opposing edges of said base wall section, and wherein said slot lies between free edges of said side wall sections (Fig. 1);

Even though Silverbrook does not disclose the sequence of steps of assembling the inkjet printhead assembly, it has been held that determination of patentability of a product is based on the product itself and does not depend on its method of production. In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Allowable Subject Matter

5. Claims 11-16, 20-23, 28, 29, 36-42, and 46-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 51-53 are allowed.

Reasons For Allowance

6. The combination as claimed wherein a shim shaped to be received in the slot in the elongate member and to lie between the elongate member and said printhead segment carriers (claims 11, 36) or a first cap secured to a first terminal end of the elongate member and having an ink inlet port in fluid communication with the or an associated one of said ink supply channels (claims 20, 46) or an external protective shield plate covering the printhead segment carriers and having openings arranged to permit unimpeded passage of ink ejected from nozzles of printhead segments mounted to the carriers towards a surface passing beneath the support (claims 23, 48) or said elongate member further includes at least one internal web standing out from the base wall section and extending along said elongate member (claims 16, 28, 51) is not disclosed, suggested, or made obvious by the prior art of record.

Art Unit: 2861

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 308-0956.

A handwritten signature in black ink, appearing to read "Michael Nghiem", written in a cursive style.

Michael Nghiem

February 22, 2002